

**REMARKS**

This Amendment is submitted in response to the Supplemental Advisory Action dated June 16, 2004 and the final Office Action dated January 1, 2004. Entry and consideration of this Amendment are respectfully requested.

Claims 1, 3-14, 18, 20-29 and 31 are all the claims pending in the application. Claims 1 and 18 have been amended to describe time domain reflectometry (TDR) in the body of the claim. Therefore, the TDR aspect of the claim should clearly be given patentable weight.

In the Supplemental Advisory Action dated June 16, 2004, the Examiner asserts that frequency domain analysis provides a broader range for analyzing the responses of test signals by taking an additional step of converting the time domain response to frequency domain response via a fast fourier transform algorithm. The Examiner indicates that this would enable technicians to identify the characteristics of the line much easier. Thus, the Examiner asserts that Walance's teaching improves the technique of determining the characteristics of the line by using FDR instead of TDR.

However, there is no indication that FDR and TDR are clearly interchangeable. Merely because Walance teaches FDR does not mean that Walance teaches TDR. The Examiner's reasoning is merely a result of impermissible hindsight.

Furthermore, the operations of FDR and TDR are not the same as would be apparent to one of ordinary skill in the art. For example, with FDR, a sinus is sent at one frequency and characteristics of the reflection, such as amplitude, are determined. The frequency is incremented, the sinus is again sent, and a measurement is again taken. The process is repeated on the entire frequency band. Results are consequently presented as a function of frequency.

With TDR, a pulse covering a certain frequency band is sent in a short period of time and the results are presented as a function of time. Based on the forgoing example, it is apparent that FDR and TDR are not merely interchangeable. In particular, FDR and TDR require different steps in the building of pulses and have different properties and post processing. Therefore, Walance does not teach TDR as recited in claims 1 and 18.

Since the Examiner has not established where TDR is disclosed in the prior art, claims 1 and 18 and their dependent claims should be deemed patentable.

The Examiner also indicates that Cabot does not teach reflectometry but was cited for teaching the overlapping of signals. However, Applicant submits that, assuming Cabot teaches overlapping signals, the combination of Cabot with Walance is not obvious. In particular, Cabot does not teach reflectometry. The Examiner cannot pick and choose among individual parts of assorted prior art references as a mosaic to recreate a facsimile of the claimed invention. *Akzo N.V. v. U.S. International*, 808 F.2d 1471, 1481 (Fed. Cir. 1986). The Examiner's motivation for the combination of Cabot with Walance is clearly a result of impermissible hindsight.

For at least the above reasons, claims 1 and 18 and their dependent claims should be deemed patentable.

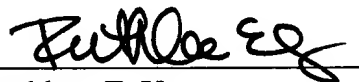
In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

AMENDMENT UNDER 37 C.F.R. § 1.114(c)  
U.S. APPLN. NO.: 09/740,939

ATTORNEY DOCKET NO. Q62126

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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